

**Preliminary Amendment**

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Applicant(s): Peixuan GUO et al.  
Serial No.: Unassigned (*Int'l Appln No.: PCT/US 2003/039950*)  
Filed: Herewith (*Int'l Appln Filed: 16 December 2003*)  
For: pRNA CHIMERA

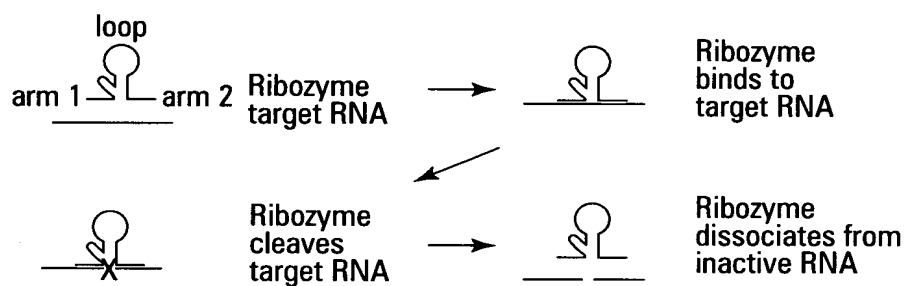
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**Amendments to the Drawings**

Please enter the 30 sheets of formalized drawings submitted herewith. The 30 sheets included herewith replace the original sheets as published with International Application No. PCT/US 2003/039950.

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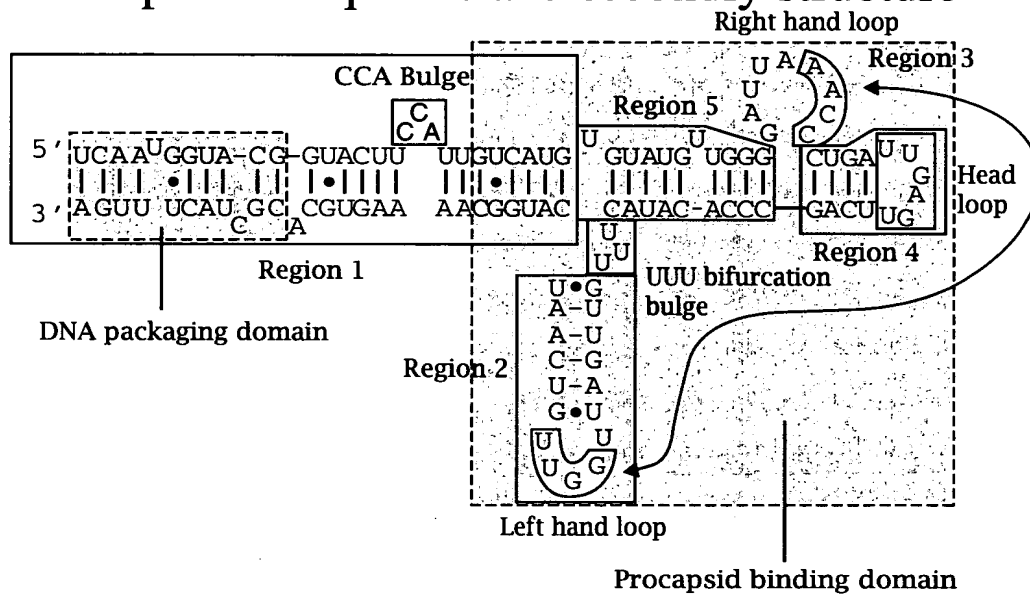
*Fig. 1*



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# pRNA sequence and secondly structure

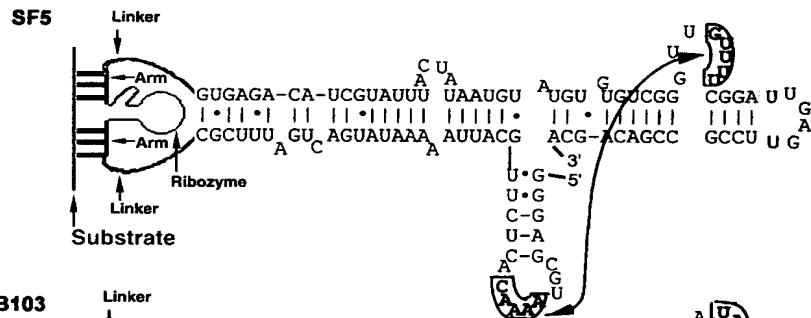


*Fig. 2b*

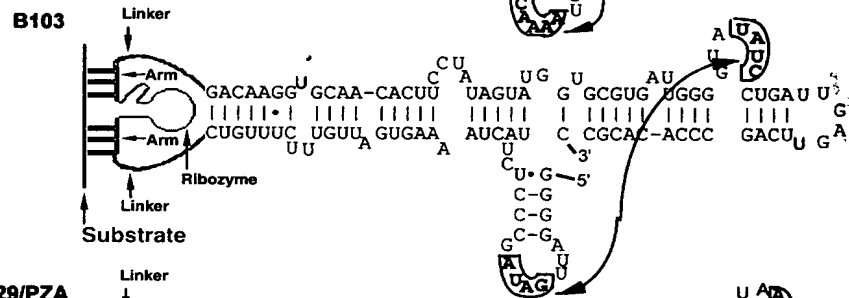
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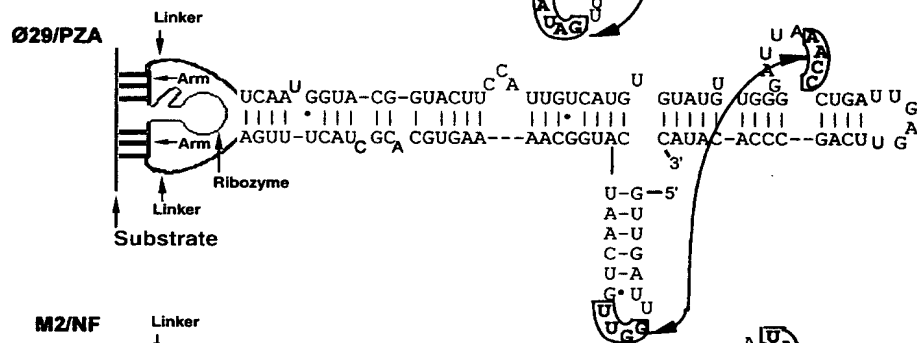
*Fig. 3a*



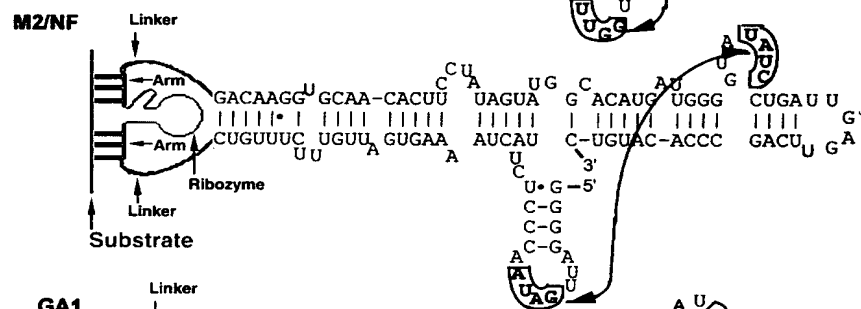
*Fig. 3b*



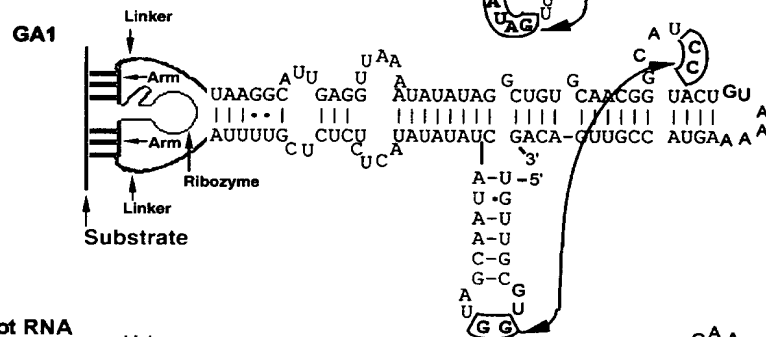
*Fig. 3c*



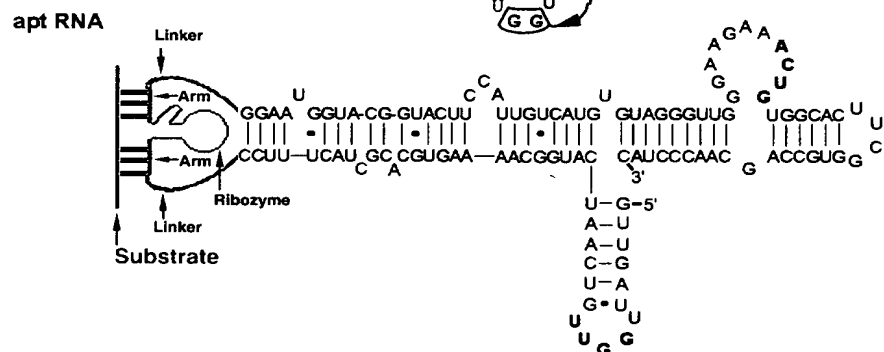
*Fig. 3d*



*Fig. 3e*

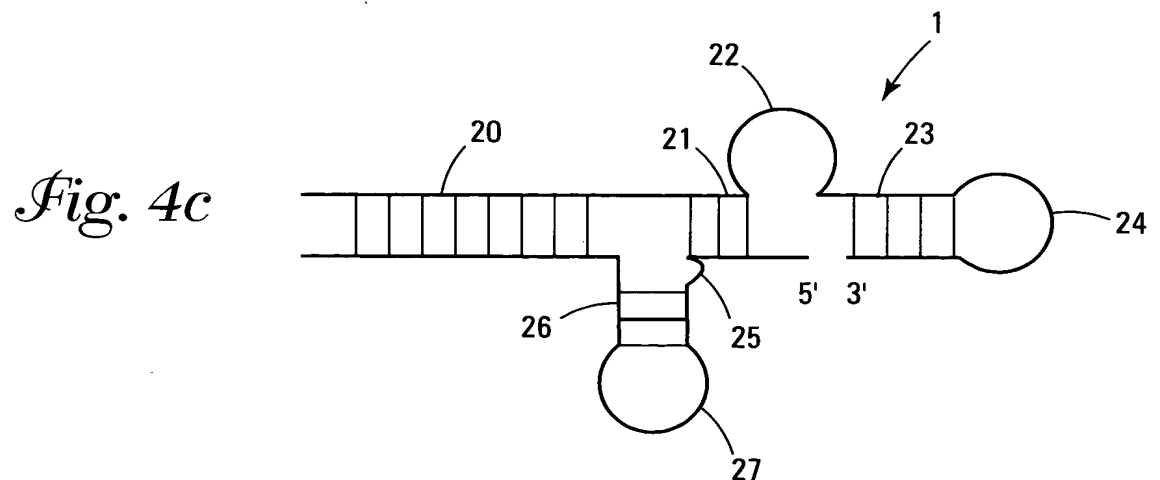
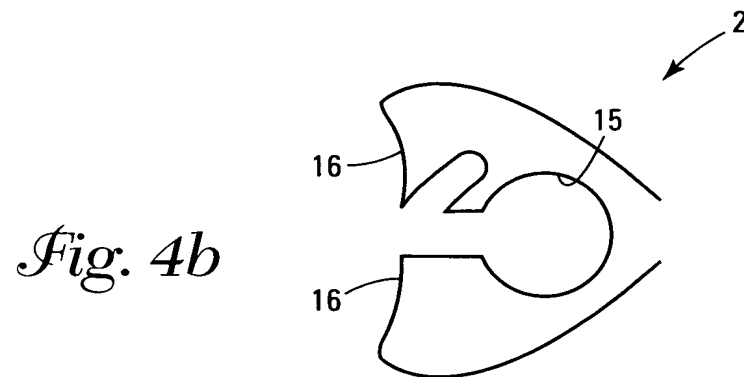
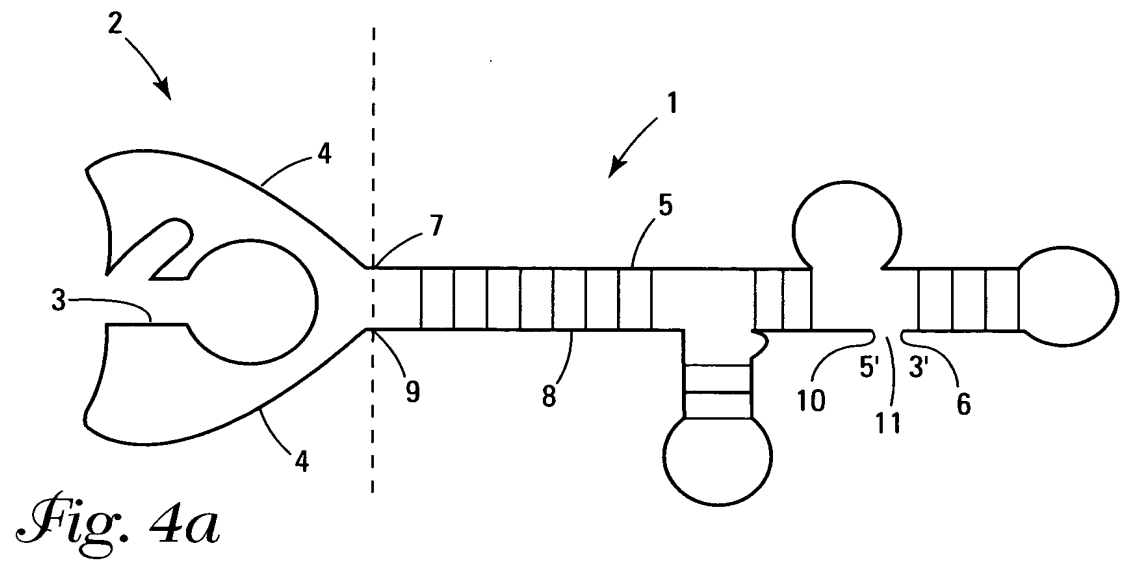


*Fig. 3f*



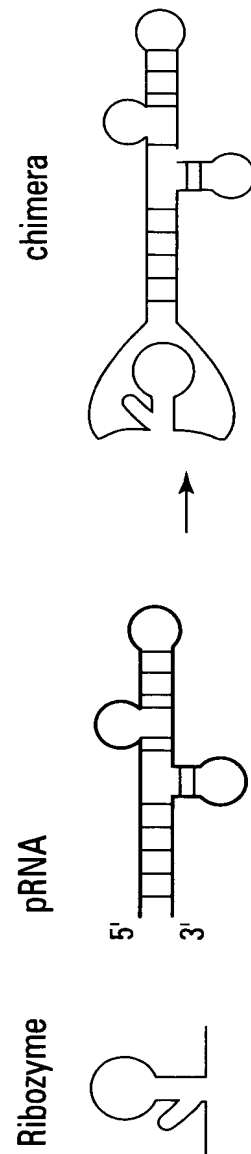
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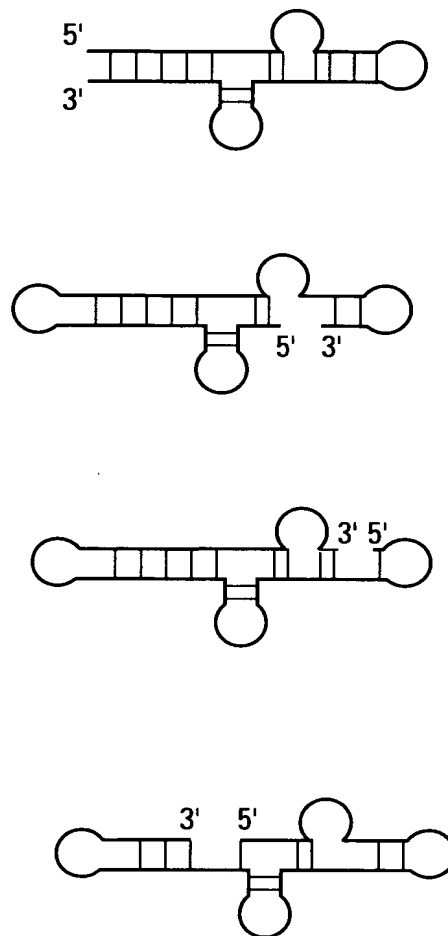
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*Fig. 5a*

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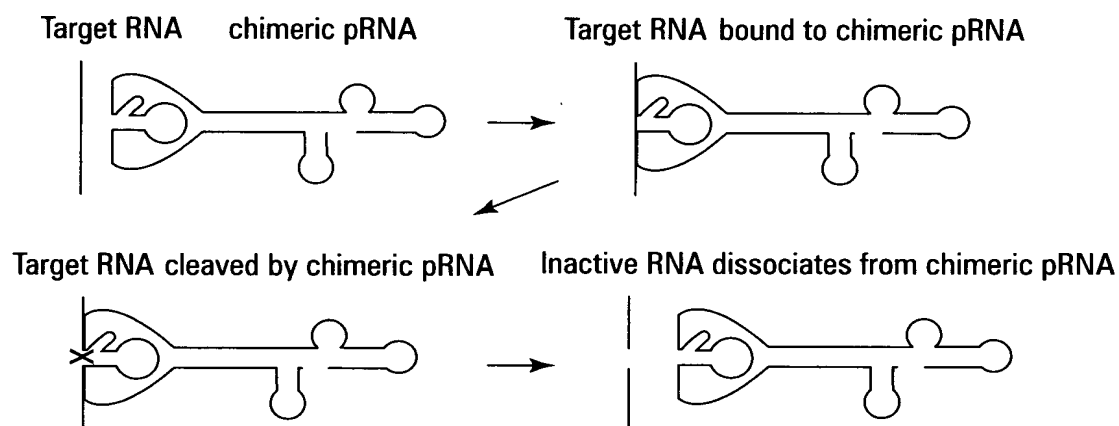


*Fig. 5b*



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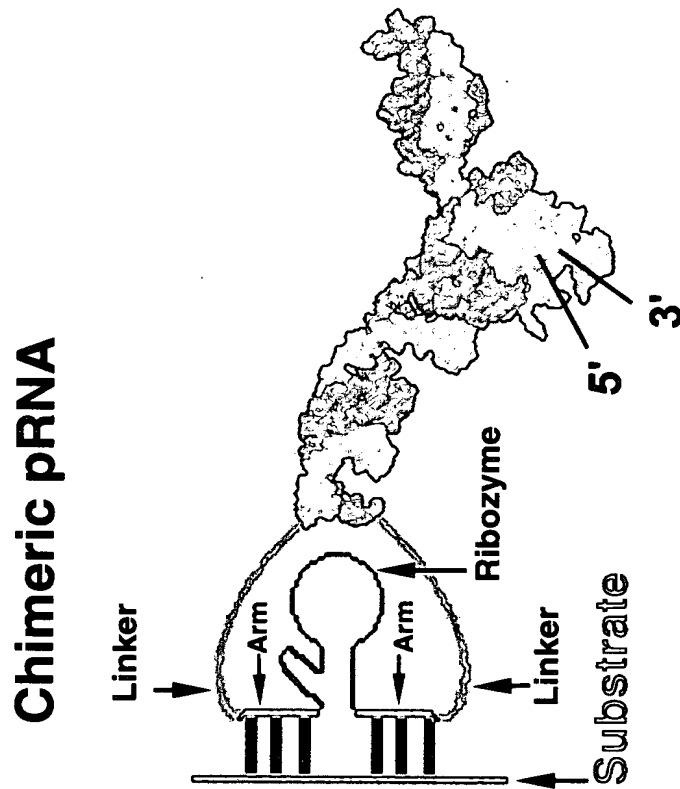
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*Fig. 6a*

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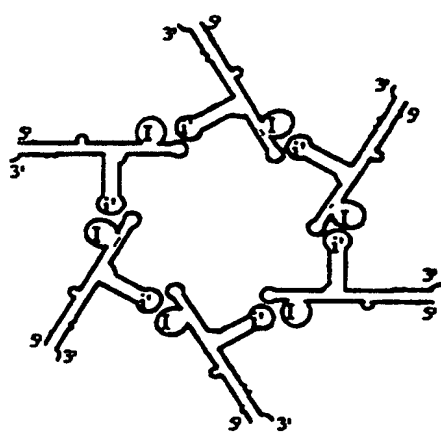
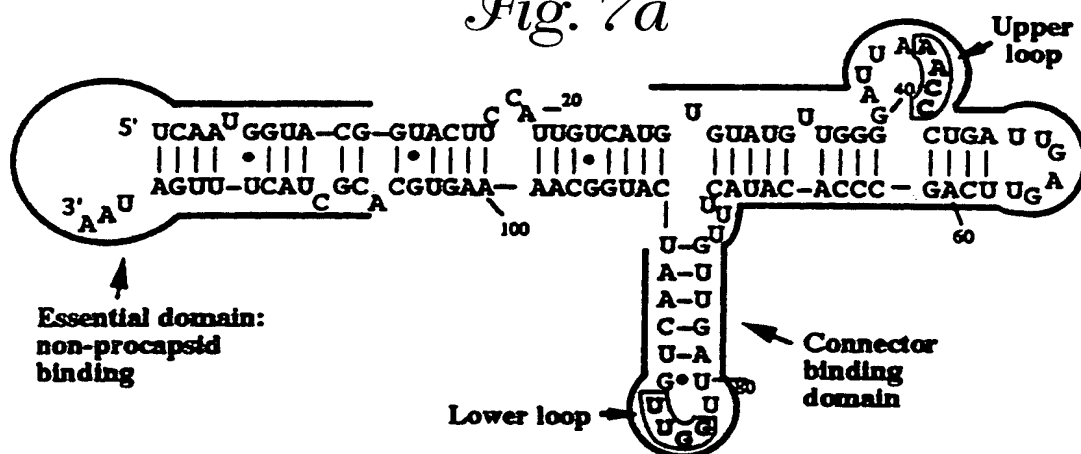


*Fig. 6b*

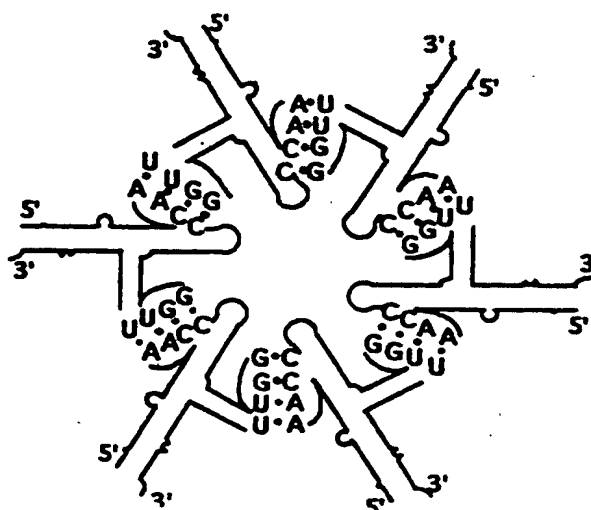
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*Fig. 7a*



*Fig. 7d*



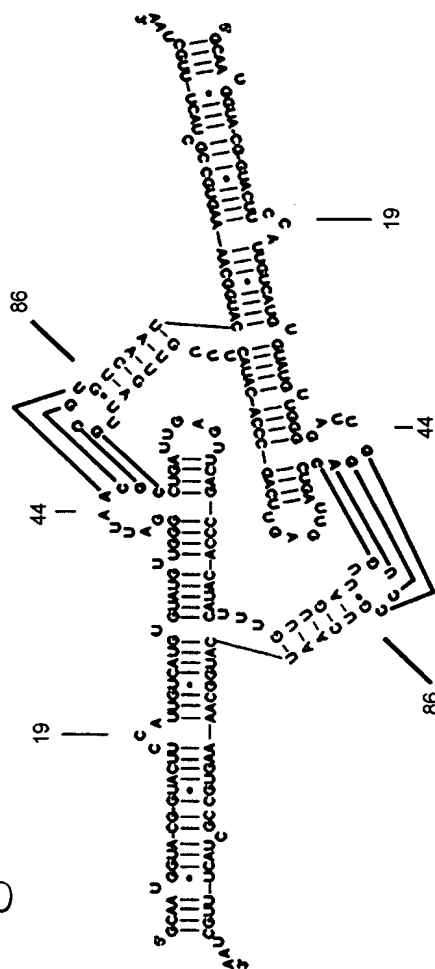
*Fig. 7e*

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Fig. 7c



Fig. 7b



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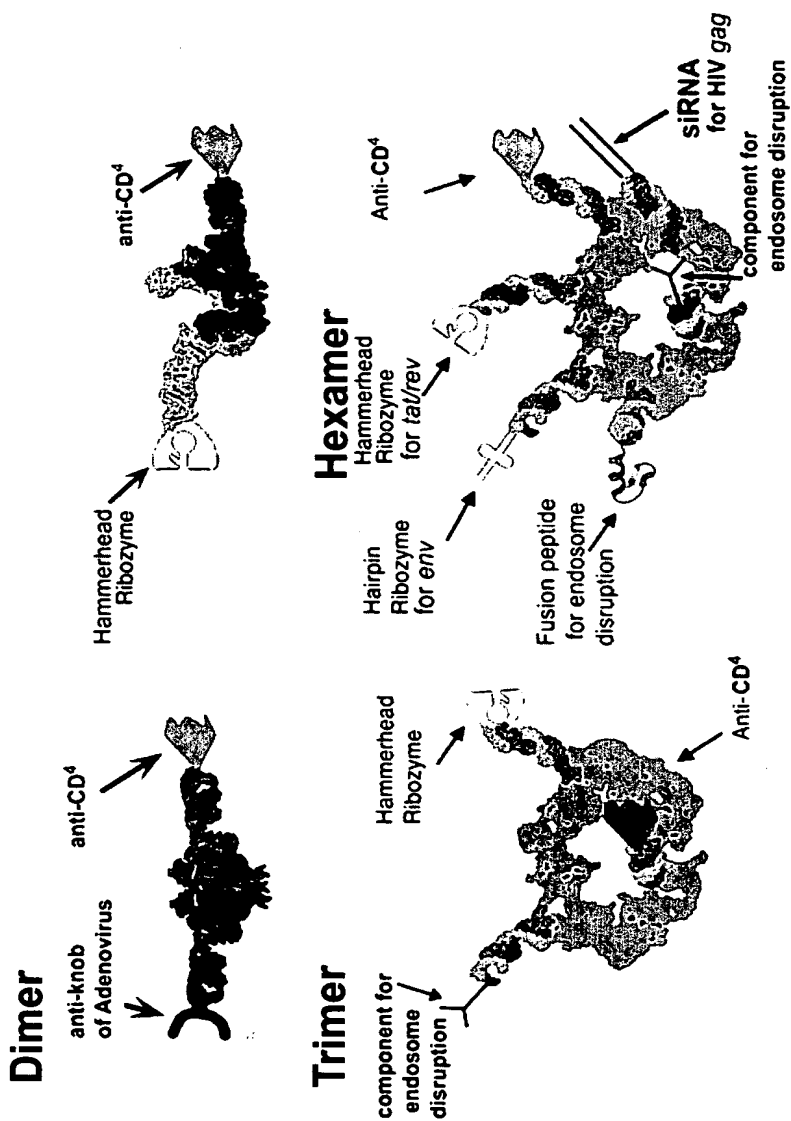
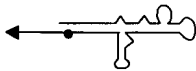
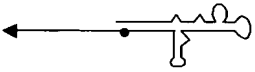
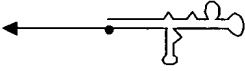
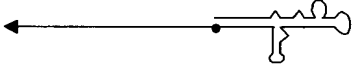


Fig. 8

Fig. 9

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Name of RNA	Activity	Sequence of 3' overhang	3' overhang base number	Structure
Eco-pRNA	$10^8$	AA GCC GAA UU (SEQ ID NO:19)	10 bases	 3' overhang 10 bases
XbHi-pRNA	$10^8$	AAGCCGAAUUC AGCACACUGGCG GCCGUUACUAGU GGAUCCGAGCUC GGUACCAAGCU (SEQ ID NO:20)	59 bases	 3' overhang 59 bases
174-pRNA	$10^8$	CCUUUUACAUGC GACACAGACGAA GCGCUAAAACGU GGGAUUCUGUG UCGUUUU (SEQ ID NO:21)	54 bases	 3' overhang 50 bases
Di-RNA	$10^8$	UCAAUGGUACGG UACUCCAUUGU CAUGUGUAUGUU GGGGAUUAAACC CUGAUUGAGUUC AGCCCACAUACU UUGUUGAUUGGU UGUCAUCAUGG CAAAAGUGCACG CUACUUUGAUAA (SEQ ID NO:22)	120 bases	 3' overhang 120 bases

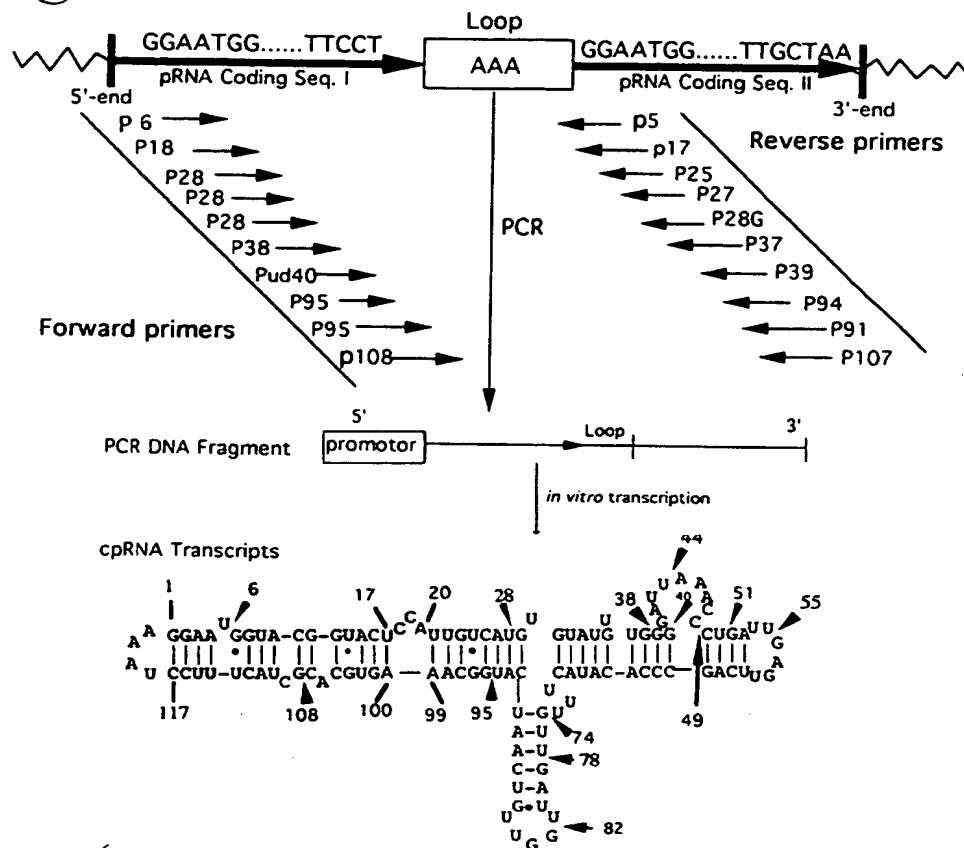
*Fig. 10*

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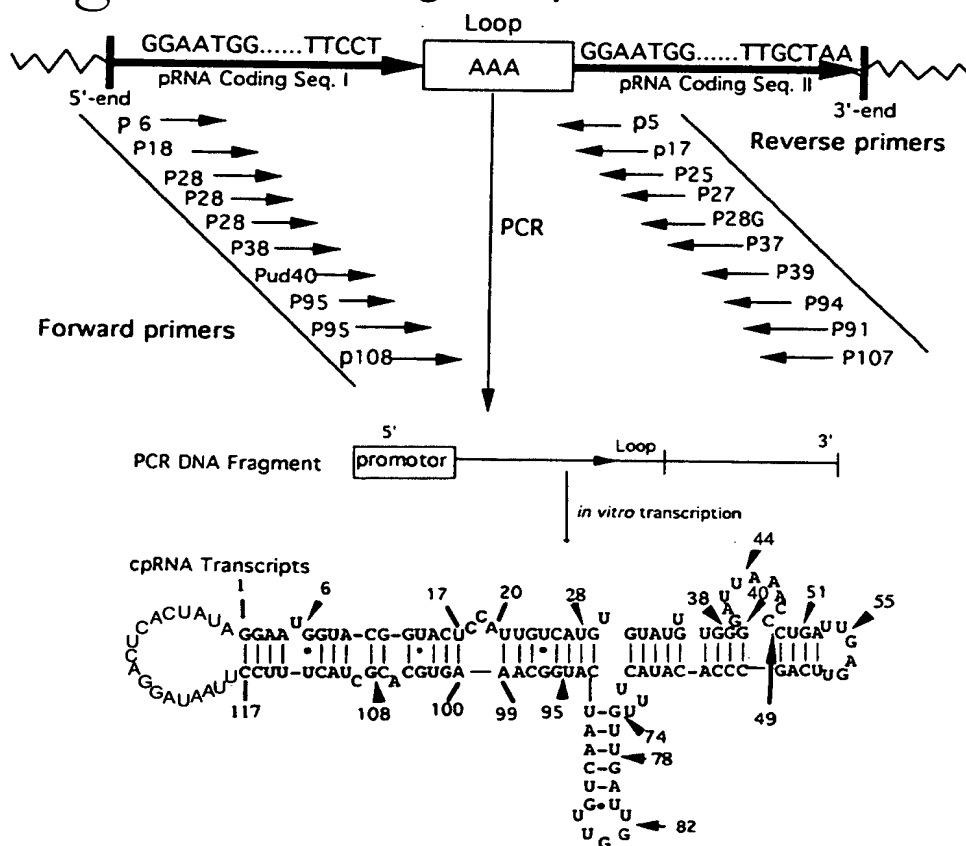
*Fig. 11a*

Small loop inserted



*Fig. 11b*

Large loop inserted

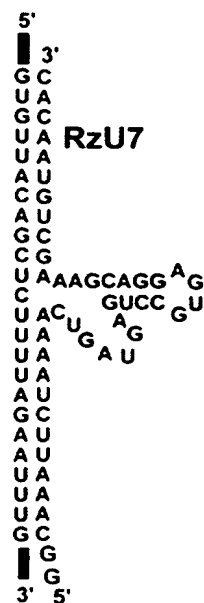






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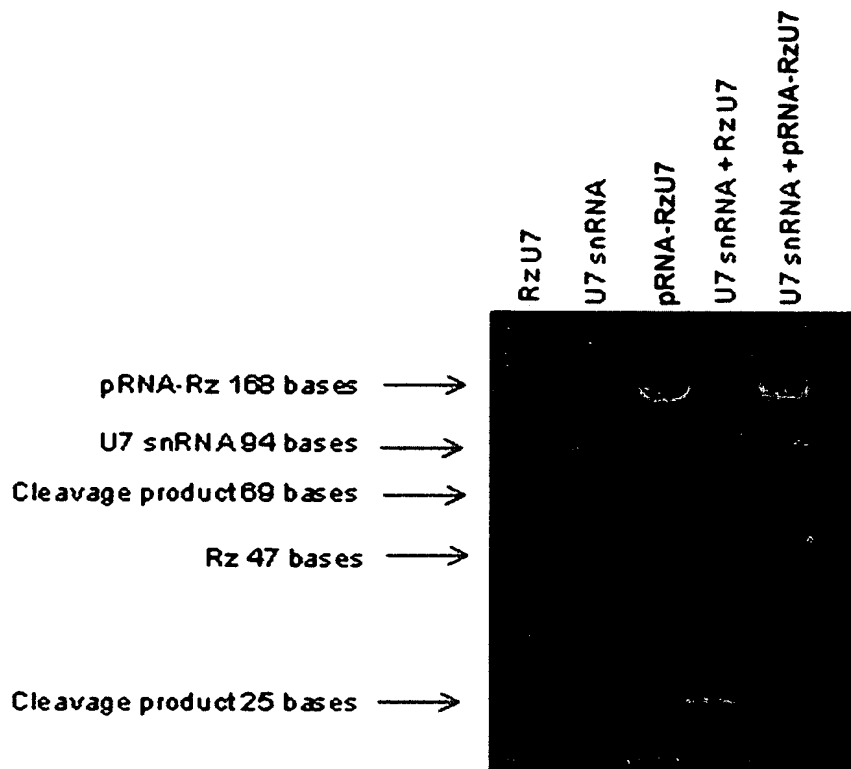
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*Fig. 13a*

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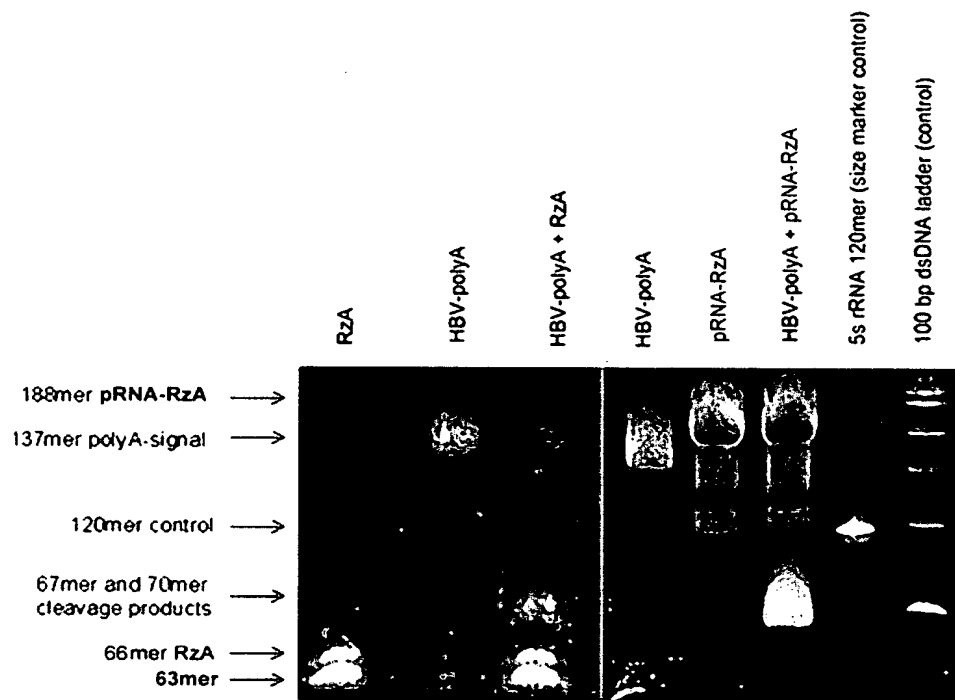
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*Fig. 13b*

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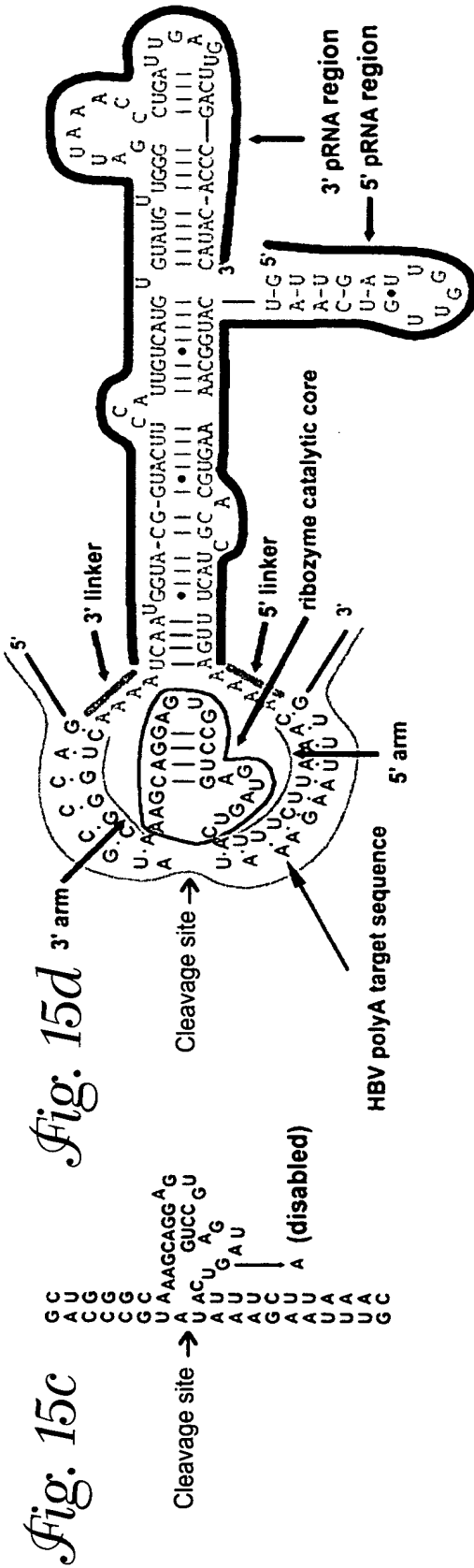
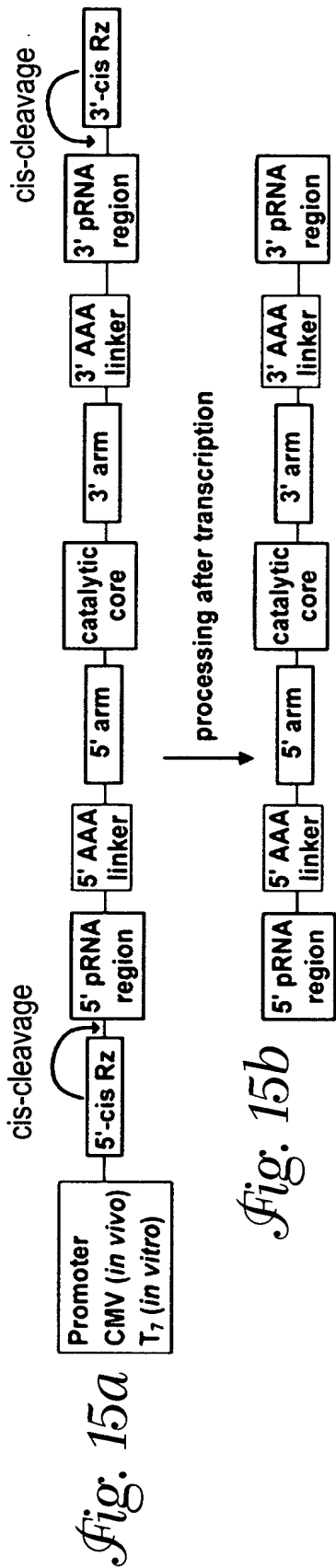
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*Fig. 14*

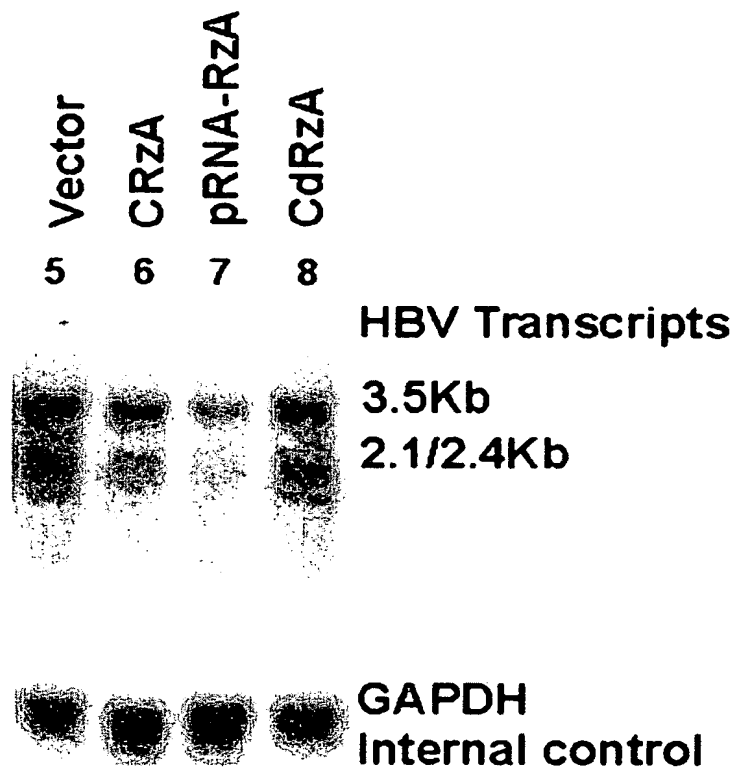
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*Fig. 16*

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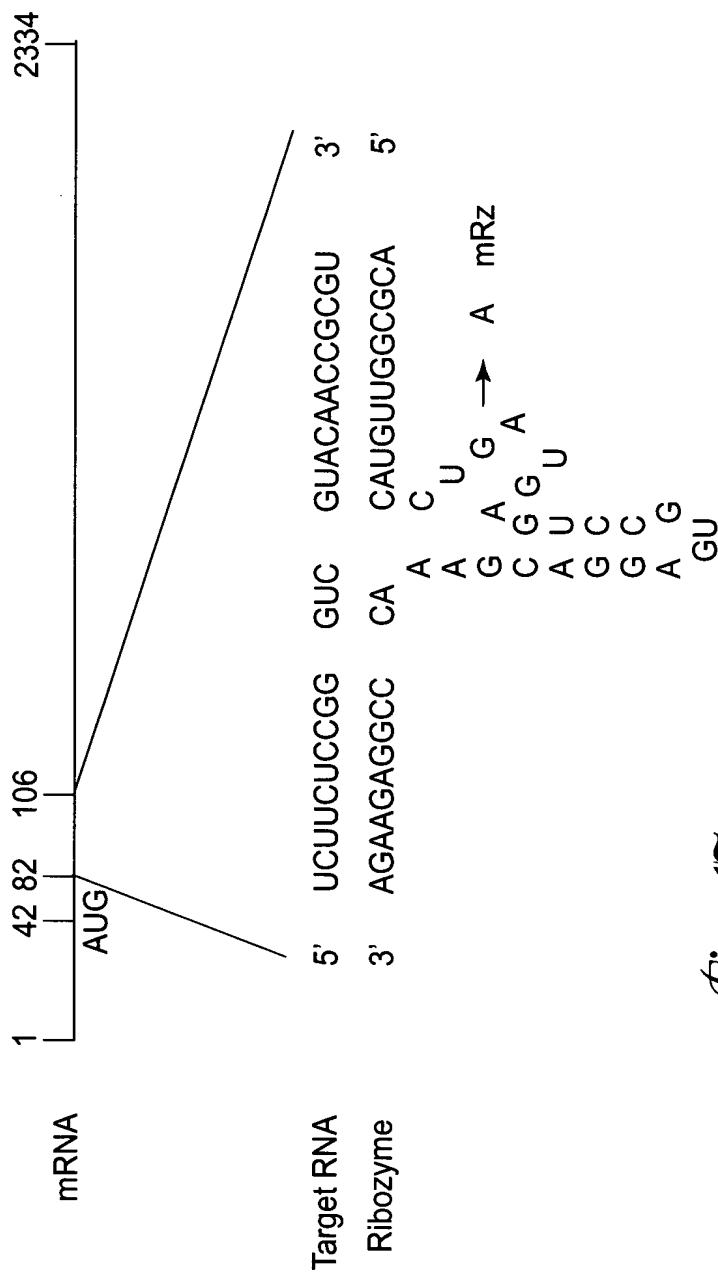
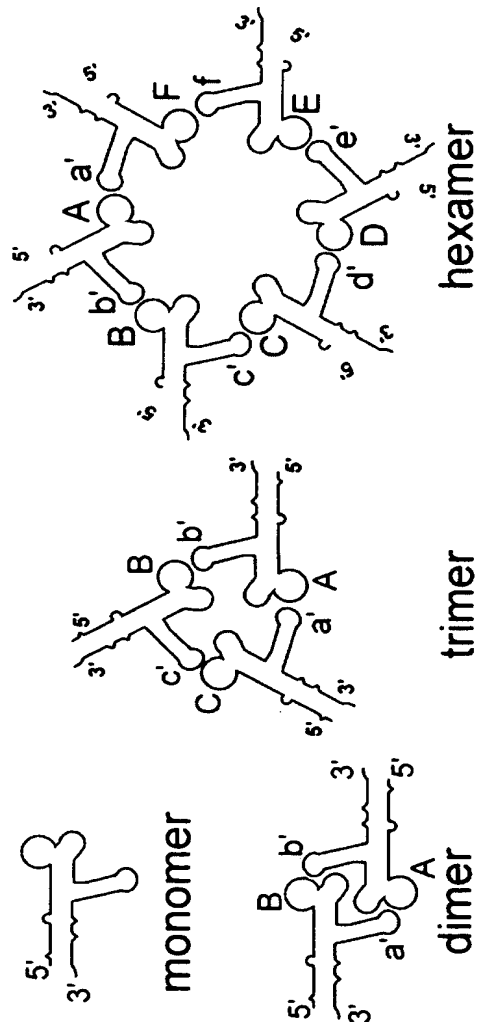


Fig. 17

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*Fig. 18*

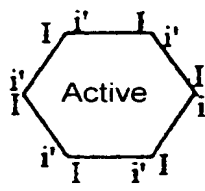
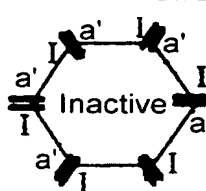
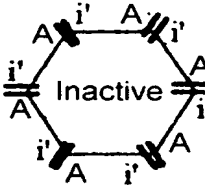
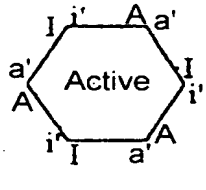


*Fig. 19c*

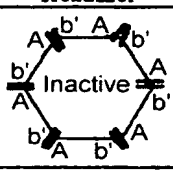
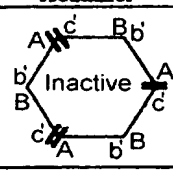
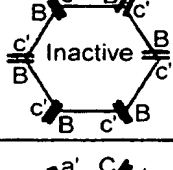
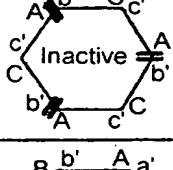
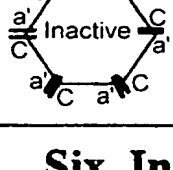
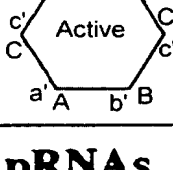
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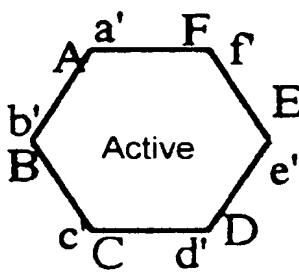
**Table A Two Interlocking pRNAs**

pRNAs	Predicted Hexamer	pRNAs	Predicted Hexamer
I-i' (wild type pRNA)		I-a' (unpaired loop)	
A-i' (Unpaired loop)		(I-a') + (A-i') (Compensatory pair)	

**Table B Three Interlocking pRNAs**

pRNAs	Predicted Hexamer	pRNAs	Predicted Hexamer
A-b' (Unpaired loop)		(A-b') + (B-c') (miss one link)	
B-c' (Unpaired loop)		(A-c') + (C-b') (miss one link)	
C-a' (Unpaired loop)		(A-b') + (B-c') + (C-a') (compensatory trimer)	

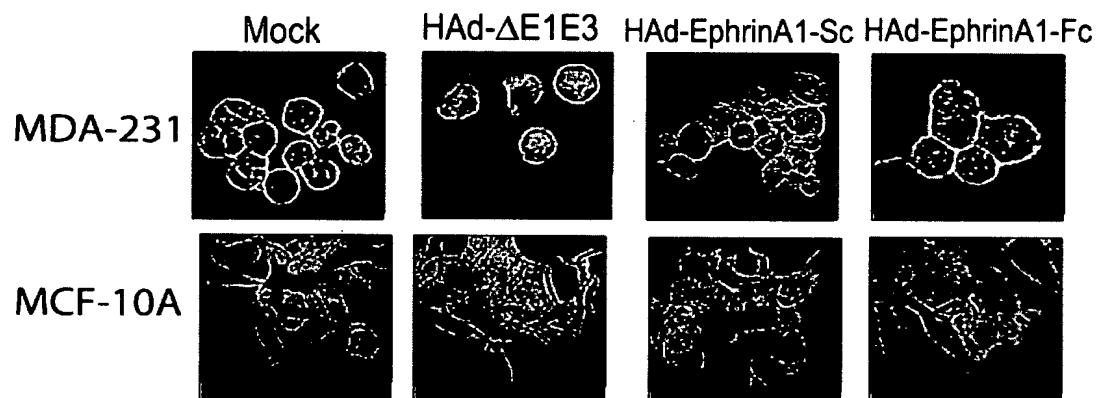
**Table C Six Interlocking pRNAs**

pRNAs	Predicted Hexamer
(A-b')+(B-c')+(C-d')+(D-e')+(E-f')+(F-a')	

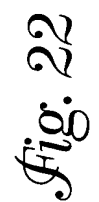
*Fig. 20*

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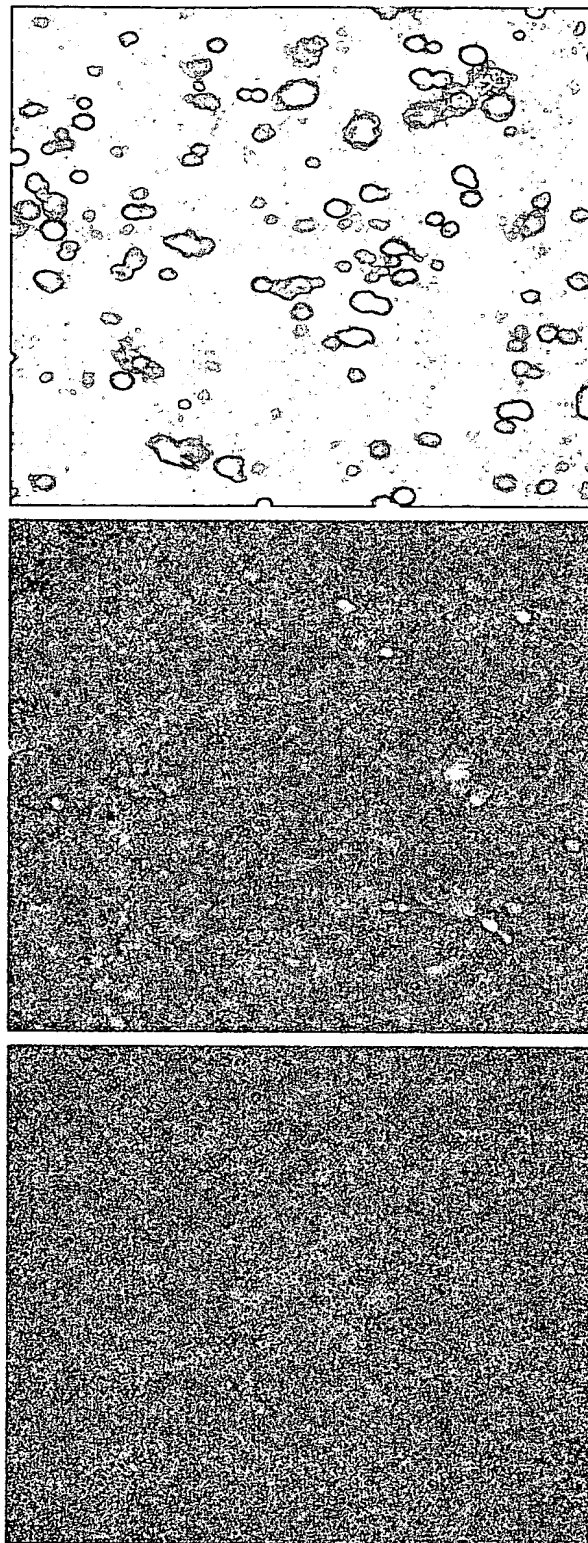
*Fig. 21*



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# Silencing of GFP Gene by siRNA

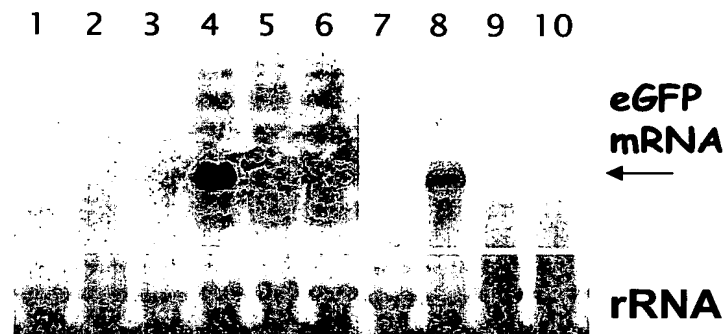


Chimeric siRNA      21-bp siRNA      No siRNA

*Fig. 23a*

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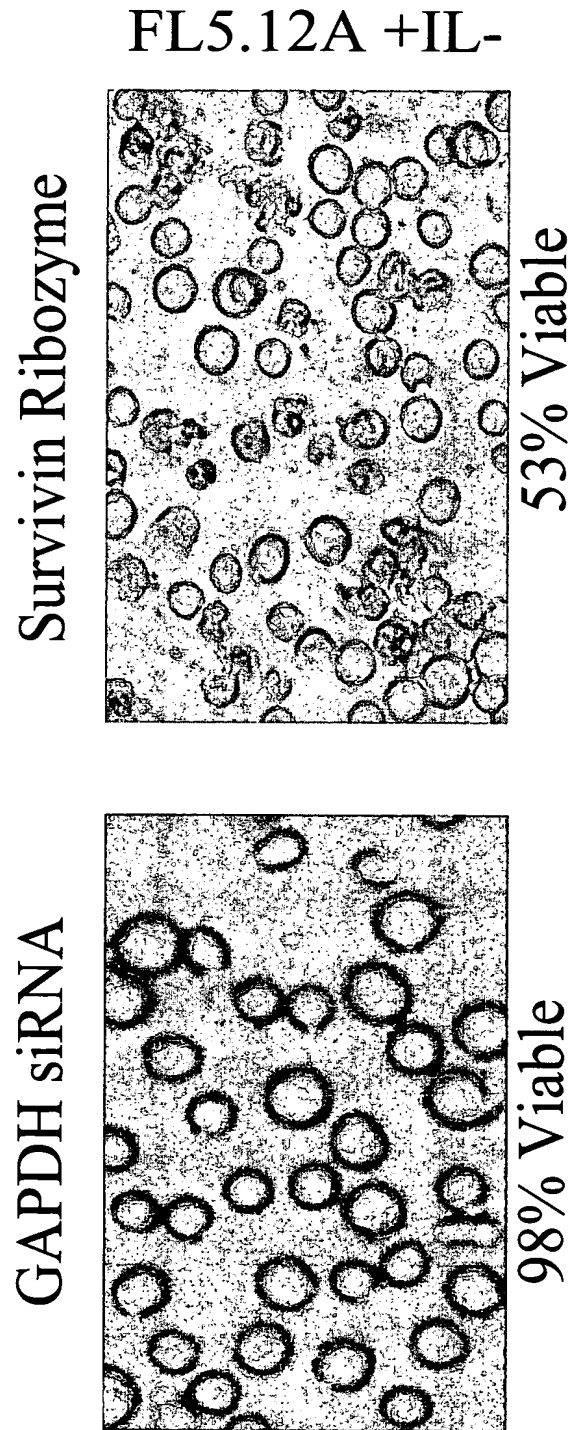
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*Fig. 23b*

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*Fig. 24*